

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 4304**

Roll No.

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**B.Tech.****(SEMESTER-II) THEORY EXAMINATION, 2011-12****MANUFACTURING PROCESSES****Time : 2 Hours ]****[ Total Marks : 50****Section – A**

1. Attempt **all** questions. All questions carry equal marks. **5 × 2 = 10**
- (a) Explain the terms :
- (i) Fatigue
- (ii) Creep
- (b) Define Pattern. What are different types of patterns ? List the various types of allowances which are usually provided in a pattern.
- (c) What is the difference between straight polarity and reverse polarity in Electric arc welding ?
- (d) Define plant layout. What are the different types of plant layout ?
- (e) What are different parts of Lathe machine ? Name the operations, which can be performed on Lathe machine.

**Section – B**

2. Attempt any **three** questions. All questions carry equal marks. **3 × 5 = 15**
- (a) What are plain carbon steels ? Discuss in brief the classification of plain carbon steels and also state few applications.
- (b) Discuss briefly the causes and remedies of any five casting defects.
- (c) What are the advantages and disadvantages of hot working and cold working processes ?

- (d) List the advantages, disadvantages and applications of Powder metallurgy process.
- (e) Explain with neat sketch, principal parts of Shaper.

### Section – C

3. Attempt **all** questions. All questions carry equal marks.

**5 × 5 = 25**

(a) Write short note on any **two** of the following :

- (i) Annealing.
- (ii) Normalizing.
- (iii) Tempering.

(b) Explain Die casting with neat sketch. State its advantages and disadvantages.

**OR**

What is Extrusion ? How extrusion processes are classified ? List the applications of Extrusion process.

(c) Differentiate between up milling and down milling.

**OR**

Define welding. What is Electric arc welding ? Explain with the help of neat sketch, the principle used in Electric arc welding.

(d) Compare process layout and product layout.

**OR**

What is composite material ? How are composite materials classified ? Write the applications of composite materials.

(e) Differentiate between soldering and brazing process.

**OR**

Write the properties and applications of

- (i) Stainless steel
  - (ii) Duralumin
  - (iii) Wrought Iron
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